

between the total and relative heights being the supposition that the whole was elevated on a basement; the other apparent discrepancy between the lengths of the sides and fronts and the total circuit of the building can only be satisfactorily explained by supposing that it stood within an enclosure, or upon a platform of the larger dimensions, viz., 440 feet in perimeter. When we come to the details of the arrangement of the parts, we find most writers giving the simple explanation, which most readers of Pliny would probably adopt at first sight, that the thirty-six columns formed a single peristyle all round the building. To this view there are very formidable objections, and another, which has not only the merit of being exceedingly ingenious, but the authority of an accomplished architect, is proposed by Mr. Cockerell in Mr. Newton's *Essay in the Classical Museum*. Taking, on the one hand, Pliny's 63 feet as the length of the longer side of the peristyle, and, on the other hand, calculating the dimensions of the order from the existing fragments of the frieze, (which in the case of a work of that period of Greek art an architect can do with much certainty), Mr. Cockerell arrives at the conclusion that the thirty-six pillars were arranged in a single row of six columns on each front, and in a double row of eight on each side, at intercolumniations of 6 feet 8 inches, around a long narrow *cella*, corresponding in length to six of the columns of the peristyle, and in width to two. The researches of the latest travellers furnish a strong hope that good elements for reconstructing the plan of the Mausoleum may be found among the fragments of columns which are about the city of Budrum, or are worked into its walls, either when it was built by the knights of Rhodes in the fifteenth century, or when they strengthened its fortifications in 1522. In most ruins we behold what Time has spared; but ancient Rome appears to have defied him. In its present remains we see the limbs which he has rent and scattered in the struggle. Sir Stratford Canning obtained permission from the Porte to remove from the inner wall of that fortress some of the sculptured slabs which had formed its frieze, and in February 1846 they were taken down, conveyed to England, and are now deposited in the British Museum under the name of the *Budrum Marbles*. In the Roman Mausolea, as the term was afterwards used by them as a generic name for any magnificent sepulchral edifice, the form chiefly employed was that of a succession of terraces, in imitation of the *regius*. Of these the most celebrated were those of Augustus and Hadrian; the latter of which, stripped of its ornaments, still forms the fortress of Modern Rome (the Castle of St. Angelo); but of the other, which was on a still larger scale, and which was considered one of the most magnificent buildings of Augustus, there are only some insignificant ruins.

This naturally induced us to turn our attention to *Time*, as it may be well to inquire how the division of that "old enemy" was regulated. We shall find the subject treated under the headings *Hora* and *Horologium*, the last being the name, as our readers know, of the various instruments by means of which was measured the time of the day and night. The first horologium known seems to have been the sun-dial, called by the Romans *solarium*, and by the Greeks *ηλιακόν*; but as these were found to be of no service unless the sun shone, they were superseded by the clepsydra, deriving its name from *κλέψω* and *δραμα*, as in its original and simple form it consisted of a vessel with several little openings at the bottom, through which the water contained in it escaped. Several improvements were made on the original system, but all these were excelled by the ingenious invention of Ctesibius, a celebrated mathematician of Alexandria. It is described by Vitruvius: water is made to drop upon wheels, which were thereby turned: the regular movement of these wheels was communicated to a small statue, which, gradually rising, pointed with a little stick to the hours marked on a pillar which was attached to the mechanism. It

indicated the hours regularly throughout the year, but requiring to be often attended to and regulated, did not come into general use, being found only in the houses of the wealthy, the sun-dial or gnomon, and a simpler kind of clepsydra, being used to a very late period. There is still existing, though in ruins, a horological building, which is one of the most interesting monuments at Athens. It is the structure formerly called *The Tower of the Winds*, but now known as the *Horological Monument of Andronicus Cyrrhestes*.



FIG. 3.

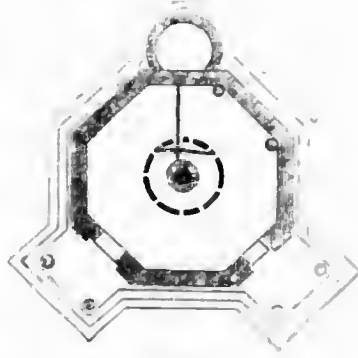


FIG. 4.

This building is fully described by Vitruvius, and our engravings 3 and 4 show its elevation and ground plan, as restored by Stuart. The turret in south wall contained the cistern which supplied water to the clepsydra.

There is so much in this volume to interest our readers, including valuable discussions on the baths, the temples, amphitheatres, aqueducts, &c., of the ancients, that we shall make another dip into it, and will only say, in the meantime, that it will be found a mine of knowledge, and will make a small library in which it is placed equal to many a large collection without it.

INSECURE BALCONIES.—In your last week's number two serious accidents are mentioned as having occurred very recently from the falling of balconies. No practical man who is in the habit of walking about the suburbs can have failed to remark the generally insecure state of the balconies to third and fourth-rate houses, the only marvel being that accidents do not more frequently occur. This glaring evil may be, however, very easily and inexpensively obviated by invariably securing balconies with ornamental cast-iron cantilevers running through the whole thickness of the wall, and pinned in: they may be obtained in a great variety of patterns at any of our large iron warehouses, and the additional cost accruing from their use would not in ordinary cases exceed 5s. per house.—E. M.

ON SKYLINES.*

THE influence of architecture on the nation by which it is fostered, and the impressions which even the various component parts of it make upon the spectator, can scarcely be estimated: that it is great, no one can deny, and we possess a glorious privilege to plant upon the land we love, o'er the grave of buried years, emblematical monuments of their worth and their civilization, to form the connecting link, more truthful than the written page, between the buried past and the historian of the veiled future,—to mould the subject-matter for the strains of future poets. But to ensure such tributes to our art, it must be rendered worthy of them. Resolutely must we labour, fervently and religiously ponder on all which constitutes its greatness. The measureless compass of our study must nothing daunt us. *Sans peur* we must be, if we would be *sans reproche*. The materials of which beauty is built up must be thoroughly comprehended. Each of the outworks must be mastered ere we attempt the holy citadel. There must be no leaps over rapid we cannot breast, but all must be gained by a persevering course, and the print of each onward step must be garnered in our minds.

Outline, colour, harmony, unity, expression, fitness, are all worthy our attention and our contemplation: but the foundation of all beauty is undoubtedly *FORM*. Even this is capable of being again subdivided into the general grouping of the building and its relationship to adjacent objects: the composition of its several parts, and the outline of its detail. I shall, on the present occasion, offer a few remarks upon the form of the highest points of a building—the skyline, as it is called—where it stands distinctly forth against the over-arching firmament, where no broad shadow nor dazzling light can, as on a wall, cast a deepening veil upon its form.

It is immaterial what the subject be: whether church, conventicle, warehouse, or an ivied cottage, the skyline of a design cannot escape the spectator's eye: the architect, so long as he preserves the fitness of the parts and the character of the building, has the whole realm of form before him to make his work harmonious and striking. It is not the shadows which fall behind the porticoes of the classic temples, depicting their columns in sharp outline and the boldness of their projection: it is not the long lines of their cornices, so harmonious with the broad outstretching desert and the line of the distant main, which Byron marked when standing beneath the portico of Pallas's fane: it is not these which give them grandeur, though certainly aiding in the work; but the beautiful, gently sloping, reposeful lines which stand forth in silent beauty from the deep azure of the cloudless eastern sky. The sky in these sunny climes is generally one unbroken calm—

"Where not a breath disturbs the air serene—
Where not a cloud throughout its expanse is
seen;"—

consequently, as a general rule, the skyline of their buildings is unbroken, and the contrast is formed by the simple outline of the structure.

Leaving the lands of cloudless skies and sandy plains, it must be evident to all, that where the sky is continually varying, where pillowy clouds float through the air "as on their way to some celestial shore," without any tokens of line, a very different treatment must be pursued in determining the skyline of our buildings. The fitful changes of our northern skies are communicated to the landscape. They and it suit one another, and man has best succeeded in his buildings where he has shown his comprehension of nature's wisdom, and given irregularity in the crowning feature of his work. I need not remind you, and yet they are illustrative of our subject, of the marvellous effect visible, through an observance of this principle, in the works of the mediæval builders, in their cathedrals and abbeys, and even in the old timber houses still existing both in England and on the con-

* From a paper read at a meeting of the Architectural Association.